

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

FULLVIEW, INC.,
Plaintiff,

v.

POLYCOM, INC.,
Defendant.

Case No. [18-cv-00510-EMC](#)

**ORDER DENYING DEFENDANT'S
MOTION FOR SUMMARY
JUDGMENT, AND GRANTING
PLAINTIFF'S MOTION FOR
SUMMARY JUDGMENT**

Docket Nos. 179-180

Plaintiff FullView, Inc. ("FullView") filed this lawsuit against Defendant Polycom, Inc. ("Polycom") alleging patent infringement. FullView is the owner of a group of patents disclosing technology involving the creation of composite images—*i.e.*, a device capable of producing panoramic photographs. The patent at issue in these motions is U.S. Patent No. 6,128,143 ("143 Patent"). Now pending before the Court are cross-motions for summary judgment by the parties. Polycom moves for summary judgment that claims 10-12 of the '143 Patent are invalid as obvious, Docket No. 179 ("Polycom MSJ"), whereas FullView moves for summary judgment on the validity of those same claims, Docket No. 180 ("FullView MSJ"). Additionally, FullView moves to strike expert testimony which does not comply with the Court's Order on Polycom's Infringement Contentions. *Id.*

For the following reasons, the Court **DENIES** Polycom's motion for summary judgment, **DENIES** FullView's motion to strike, and **GRANTS** FullView's motion for summary judgment.

I. BACKGROUND

A. The '143 Patent

FullView is the owner of the '143 Patent, titled "Panoramic Viewing System with Support

Stand.” Docket No. 179-1, Exh. 1 (“‘143 Patent”). The ‘143 Patent refers to a “compact high resolution omnidirectional or panoramic viewer” which “has several cameras with a common virtual optical center.” *Id.* at 2. “The cameras are positioned so that they each view a different reflective surface of a polyhedron such as a pyramid.” *Id.*

FullView alleges infringement of independent claim 10 and dependent claims 11-12 of the ‘143 Patent. Independent Claim 10 states:

A panoramic viewing apparatus, comprising:

- [a] plurality of image processing devices, each having an optical center and a field of view;
- [b] pyramid shaped element having a plurality of reflective side facets facing in different directions,
- [c] each of at least two of the plurality of reflective side facets redirecting a field of view of one of the plurality of image processing devices to create a plurality of virtual optical centers; and
- [d] ***a support member intersecting an inner volume of the pyramid shaped element***, the pyramid shaped element being secured to the support member and the plurality of image processing devices being secured to the support member.

Id. at 16:20-34 (emphasis added). There is no dispute that claim 10’s elements labeled as [a], [b] and [c] above are disclosed in prior art references, and that the claim limitation at issue in these motions is the bolded portion of [d]: “**a support member intersecting an inner volume of the pyramid shaped element.**” *See* Polycom MSJ at 8, Docket No. 184 (“FullView Opp.”) at 6. The Court has construed the “pyramid shaped element” of claim 10 as “an object that has the shape of a pyramid, except that its apex and base may be absent or incomplete,” Docket No. 142 at 2, and “inner volume” as “inside the space defined and bounded by the pyramid shaped element,” Docket No. 137 at 7.

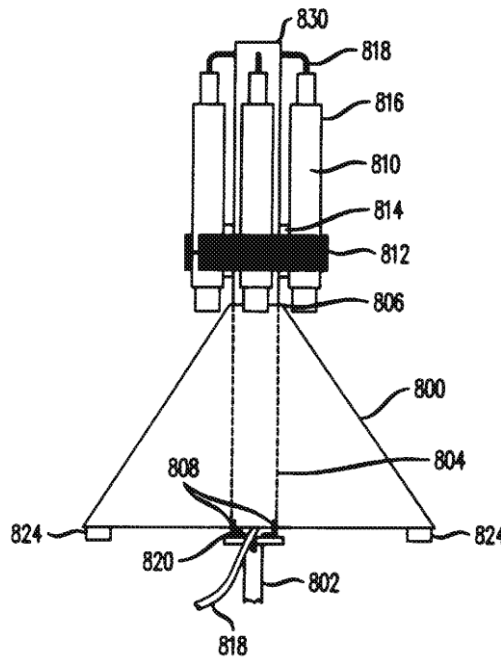
Dependent claim 11 requires that the “image processing devices” are “secured to a portion of the support member extending out from the pyramid shaped element,” and dependent claim 12 further requires that the “support member” be “hollow.” ‘143 Patent at 16:34-39. The ‘143 Patent exemplifies claims 10-12 through its Figure 17. *See id.* at 11:43-12:19.

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FIG. 17



Id. Figure 17 is described as follows (with portions referring to the “support member” at issue in claim 10 bolded):

Reflective pyramid 800 is mounted to stand or post 802 **using a support member such as hollow tube 804**. The pyramid is secured to hollow tube 804 at vertex end 806. The hollow tube is secured to stand 802 by angle brackets 808. **Hollow tube 804 extends beyond vertex end 806 so that cameras 810 may be supported by tube 804**. The cameras are mounted to tube 804 by strap or belt ... **Video and power connections to cameras 810 are provided by cables 818 which are fed through hollow tube 804 and through space 820**. . . It should be noted that hollow tube 804 may be replaced with a solid support member, however, **a hollow support member provides a convenient path for routing cables. Feeding the cables through tube 804 prevents the cables from entering the field of view of cameras 810**... It is also possible to invert the viewer of FIG. 17 so that the viewer is supported by end 830 of tube 804. **In this configuration cables 818 will simply be passed out through an opening at end 830 of tube 804**.

Id. (emphases added).

B. Procedural Background

1. Inter Partes Review History

On January 31, 2019, Polycom sought an IPR of the ‘143 Patent. Docket No. 118-1, Exh.

C. However, the PTAB denied this petition as well as Polycom’s request for rehearing on

September 10, 2019. Docket No. 180-18. The PTAB concluded that Polycom had “not demonstrated a reasonable likelihood that it would prevail with respect to at least one claim challenged in the Petition.” *Id.* at 3. As part of its analysis, the PTAB determined that none of the prior art Polycom put forward anticipated any of the challenged claims (including claims 10-12) of the ‘143 Patent, nor had Polycom demonstrated a reasonable likelihood that any prior art (including the art referenced in this motion) nor combination of prior art rendered any of the challenged claims obvious. *Id.* at 12-23.

2. Litigation History

On January 23, 2018, FullView filed its first complaint. Docket No. 1. On July 2, 2020, FullView filed its second amended complaint alleging a single claim for relief: infringement of both the ‘711 and ‘143 Patents under 35 U.S.C. § 271 by (1) direct infringement; (2) infringement by inducement; and (3) infringement via the doctrine of equivalents. SAC ¶¶ 59-66. Polycom moved to dismiss the second amended complaint’s claims pertaining to the ‘711 Patent because that patent (a) was directed at nonpatentable subject matter and (b) sought to protect an abstract idea without an inventive concept. *Id.* The Court granted Polycom’s motion to dismiss on both grounds. Docket No. 105. The Court later denied FullView’s motion to file a third amended complaint. Docket No. 144. Accordingly, only claims 10 through 12 of the ‘143 Patent are at issue in this litigation. *See* Docket No. 110 (“Joint Statement”) at 2; SAC ¶ 47.

In October 2020, Polycom served FullView with its invalidity contentions. Docket No. 180-4, Exh. A. Polycom alleged invalidity on five grounds:

Ground 1: U.S. Patent No. 3,118,340 (the “‘340 patent” or “Iwerks”) Anticipates and/or Renders Obvious Claims 10–12 of the ‘143 Patent (if construed such that the “set of nine mirrors” without their mirror support constitutes a “pyramid shaped element”).

Ground 2: U.S. Patent No. 3,118,340 (the “‘340 patent” or “Iwerks”) Anticipates and/or Renders Obvious Claims 10–12 of the ‘143 Patent (if construed such that the “set of nine mirrors” with their mirror support constitutes a “pyramid shaped element”).

Ground 3: U.S. Patent No. 3,740,126 (the “‘126 patent” or “Goto”) Anticipates and/or Renders Obvious Claims 10–12 of the ‘143 Patent.

Ground 4: Generation of High-resolution Stereo Panoramic Images

by Omnidirectional Imaging Sensor Using Hexagonal Pyramidal Mirrors, by Yamazawa et al., published on August 17–18, 1998 (“Yamazawa 1998”) Renders Claims 10–12 of the ‘143 patent Obvious.

Ground 5: High-resolution Omnidirectional Stereo Imaging Using Pyramidal Mirrors, by Yamazawa et al., published on Mar. 24–27, 1997 (“Yamazawa 1997”) Renders Claims 10–12 of the ‘143 Patent Obvious.

Id. In November 2021, the Court denied Polycom’s motion for leave to amend its invalidity contentions and to allege a counterclaim of inequitable conduct. Docket No. 172.

In its pending motion for summary judgment, Polycom argues *only* Grounds 4 and 5: that Claims 10-12 are obvious in view of Yamazawa 1998 and Yamazawa 1997. *See generally* Polycom MSJ.

II. LEGAL STANDARDS

A. Summary Judgment (Fed. R. Civ. P. 56)

“The court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. of Civ. Proc. 56(a). The Court must construe all facts in a light most favorable to the nonmoving party and draw reasonable inferences in that party’s favor. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986). A dispute is genuine only “if the evidence is such that a reasonable jury could return a verdict for the nonmoving party.” *Id.* The nonmoving party “must do more than show that there is some metaphysical doubt as to the material facts.” *Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 586 (1986). If the evidence is merely colorable, or is not significantly probative, summary judgment may be granted. *Anderson*, 477 U.S. at 249 (citations omitted).

A nonmoving party cannot defeat a motion for summary judgment by offering a conclusory opinion from an expert because that is not sufficient to create a genuine issue of material fact. *See Intellectual Sci. & Tech., Inc. v. Sony Elecs., Inc.*, 589 F.3d 1179, 1184 (Fed. Cir. 2009); *see also Soremekun v. Thrifty Payless, Inc.*, 509 F.3d 978, 984 (9th Cir. 2007) (“Conclusory, speculative testimony in affidavits and moving papers is insufficient to raise genuine issues of fact and defeat summary judgment.”); *Finjan, Inc. v. Blue Coat Sys., Inc.*, No.

13-CV-03999-BLF, 2015 WL 3630000, at *11–12 (N.D. Cal. June 2, 2015). Expert or patentee conclusions unsupported by facts are insufficient to raise a genuine issue of material fact. *Perfect Web Techs., Inc. v. InfoUSA, Inc.*, 587 F.3d 1324, 1333 (Fed. Cir. 2009); *TechSearch, L.L.C. v. Intel Corp.*, 286 F.3d 1360, 1373–74 (Fed. Cir. 2002).

B. Patent Invalidity for Single-Reference Obviousness

A patent claim is invalid as obvious if “the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” 35 U.S.C. § 103.¹

Obviousness is a question of law based on underlying factual determinations. *Insite Vision Inc. v. Sandoz, Inc.*, 783 F.3d 853, 858 (Fed. Cir. 2015). The underlying factual inquiries include: (a) “the level of ordinary skill in the art;” (b) “the scope and the content of the prior art;” and (iii) “the differences between the claimed invention and the prior art.” *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17 (1966). Secondary indicators such as “commercial success, long felt but unsolved needs, [and] failure of others,” that can “give light to the circumstances surrounding the origin of the subject matter sought to be patented” should also be considered. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 399 (2007) (internal citations and quotation marks omitted).

Each claim in an issued patent is presumed valid. 35 U.S.C. § 282. To invalidate a patent on the basis of obviousness, the moving party must prove obviousness by clear and convincing evidence. *Oakley, Inc. v. Sunglass Hut Int’l*, 316 F.3d 1331, 1339 (Fed. Cir. 2003). Summary judgment for obviousness is appropriate if “the content of the prior art, the scope of the patent claim, and the level of ordinary skill in the art are not in dispute, and the obviousness of the claim is apparent in light of these factors.” *KSR Int’l Co.*, 550 U.S. at 427.

In evaluating obviousness, a court must avoid “hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning.” *Id.* at 421. Obviousness is demonstrated when “a

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 296–07 (2011), took effect on September 16, 2012. Because the application for the patent at issue in this proceeding has an effective filing date before that date, the pre-AIA version of the statute applies here.

1 skilled artisan would have been motivated to combine the teachings of the prior art references to
 2 achieve the claimed invention, and that the skilled artisan would have had a reasonable
 3 expectation of success in doing so.” *Procter & Gamble Co. v. Teva Pharmaceuticals USA, Inc.*,
 4 566 F.3d 989, 994 (Fed. Cir. 2009). “Though less common, in appropriate circumstances, a patent
 5 can be obvious in light of a single prior art reference if it would have been obvious to modify that
 6 reference to arrive at the patented invention.” *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355, 1361
 7 (Fed. Cir. 2016) (citations omitted).

8 The Federal Circuit has remarked that the Supreme Court’s decision in *KSR*

9 [r]equire[s] an analysis that reads the prior art in context, taking
 10 account of ‘demands known to the design community,’ ‘the
 11 background knowledge possessed by a person having ordinary skill
 12 in the art,’ and ‘the inferences and creative steps that a person of
 13 ordinary skill in the art would employ.’ This “expansive and flexible
 approach,” is consistent with our own pre-*KSR* decisions
 acknowledging that the inquiry not only permits, but *requires*,
 consideration of common knowledge and common sense.’

14 *Randall Mfg. v. Rea*, 733 F.3d 1355, 1362 (Fed. Cir. 2013) (internal citations omitted). However,
 15 the Federal Circuit has also cautioned,

16 [T]here are at least three caveats to note in applying ‘common sense’
 17 in an obviousness analysis. First, common sense is typically
 18 invoked to provide a *known motivation to combine*, not to supply a
 19 missing claim limitation. Second, we have invoked common sense
 20 to fill in a missing limitation only when “the limitation in question
 21 was *unusually simple* and the technology particularly
 straightforward. Third, our cases repeatedly warn that references to
 ‘common sense’—whether to supply a motivation to combine or a
 missing limitation—*cannot be used as a wholesale substitute for*
reasoned analysis and evidentiary support, especially when dealing
 with a limitation missing from the prior art references specified.

22 *DSS Tech. Mgmt. v. Apple Inc.*, 885 F. 3d 1367, 1373 (Fed. Cir. 2018) (internal citations and
 23 quotations marks omitted) (emphasis added).

24 Finally, in *KSR*, the Supreme Court commented that obviousness *may* be shown “by noting
 25 that there existed at the time of invention a *known* problem for which there was an *obvious*
 26 solution encompassed by the patent’s claims.” *KSR Int’l Co.*, 550 U.S. at 419-20 (emphasis
 27 added). “When there is a design need or market pressure to solve a problem and there are a finite
 28 number of identified, predictable solutions, a person of ordinary skill has good reason to pursue

the known options within his or her technical grasp.” *Id.* at 421. “If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.” *Id.* “In that instance the fact that a combination was obvious to try might show that it was obvious under § 103.” *Id.*

III. DISCUSSION

A. Polycom’s Motion for Summary Judgment (Docket No. 179)

Polycom argues that it is entitled to summary judgment because there is no genuine issue of material fact regarding the obviousness of claims 10-12 of the ‘143 Patent in view of the disclosures in in Yamazawa 1997 and Yamazawa 1998.

As noted above, the underlying factual inquiries for a determination of obviousness include: (a) “the level of ordinary skill in the part”, (b) “the scope and the content of the prior art;” and (c) “the differences between the claimed invention and the prior art.” *Graham*, 383 U.S. at 17. Furthermore, secondary considerations, such as “commercial success, long felt but unsolved needs, [and] failure of others,” are also relevant to the analysis. *KSR Int’l Co.*, 550 U.S. at 399.

The parties do not argue that there are any genuine disputes of material fact precluding summary judgment. *See FullView Opp.* at 4. Rather, the parties disagree as whether Polycom has met its burden to show that application of the law of single-reference obviousness to the undisputed facts in the record demonstrates that claims 10-12 are obvious.

1. Person of Ordinary Skill in the Art (POSITA)

For the purposes of this motion, the parties agree to the definition of the relevant POSITA as provided by FullView’s expert, Dr. Nalwa: “[S]omeone who has the background and training to understand the asserted patent and its prior art. He or she must have an understanding of the geometries of reflection and image formation. An undergraduate degree in physics or electrical engineering with two years of experience in Computer Vision would typify a POSITA.” Docket No. 179-1, Exh. 4 (“Nalwa Decl.”) ¶ 14; Polycom MSJ at 17.

2. Scope and Content of the Prior Art

Polycom relies *only* on Yamazawa 1997 and Yamazawa 1998 as invalidating prior art, under single reference obviousness, that render claims 10–12 of the ‘143 patent obvious by

themselves or in combination with the knowledge of a POSITA. There is no dispute that these references qualify as prior art under 35 U.S.C. § 102. *See, e.g.*, Nalwa Decl. at ¶¶ 15, 40, 64–68.

3. Differences Between Claims 10-12 and Prior Art

The dispute with regards to Polycom’s motion for summary judgment boils down to whether Yamazawa 1997 and/or Yamazawa 1998 include disclosures that render claims 10-12 obvious. Specifically, the parties disagree *only* as to whether either the Yamazawa references render obvious the following portion of independent claim 10: “**a support member intersecting an inner volume of the pyramid shaped element.**” The parties agree that whether dependent claims 11 and 12 are obvious turns *only* on whether the above-quoted portion of claim 10 is obvious. Polycom MSJ at 26-28; Opp. at 4. The only claim limitation at issue is the intersection described in claim 10.

a. Relevant Portions of Yamazawa 1997 and 1998

Polycom’s argument of single reference obviousness relies largely on one figure in each of Yamazawa 1997 and Yamazawa 1998. Polycom argues that Figure 1 in Yamazawa 1997 renders obvious a “support member intersecting an inner volume of a pyramid shaped element.” Polycom MSJ at 12. Yamazawa 1997 was published in Japanese; Polycom provided a certified English translation of the paper and its figures, which includes the following image and captions:

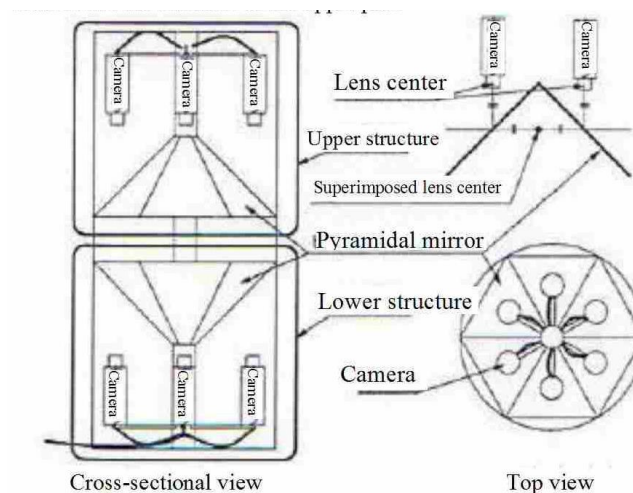


Fig. 1 Structure of omnidirectional stereo image sensor

Docket No. 179-13 (“Yamazawa 1997”) at 3. The text describing the diagram states, “As shown

1 in Fig. 1, this high-resolution omnidirectional stereo image sensor has a dual upper and lower
 2 structure for purposes of capturing omnidirectional images.” *Id.* The paper does not comment on
 3 or otherwise describe a support structure or the design of any support elements. *Id.* The paper,
 4 however, comments that the design of the device pictured in Fig. 1 is “problematic” due to the
 5 “form of the pyramidal mirrors” and the number of cameras.” *Id.* Yamazawa writes:

6 For the following reasons, it may be said that it is better to employ
 7 as few CCD cameras as possible.

- 8 • It is necessary to adjust the arrangement of the multiple CCD
- 9 cameras.
- If the accuracy of the mirror ridgeline is low, there will be
 insufficient information for that portion.

10 For the following reasons, it may be said that it is better to employ
 11 as many CCD cameras as possible.

- 12 • For purposes of obtaining high-resolution images, it is
- 13 necessary to raise the resolving power of the respective
- 14 cameras.
- The wider is the angle of the CCD camera, the greater is the
 barrel distortion of the image.

15 Consequently, it is necessary to determine the form of the pyramidal
 16 mirrors and the number of CCD cameras by taking into account
 these mutually contradictory requirements.

17 *Id.* Polycom also cites the substantially-similar Figure 1 in Yamazawa 1998, which was published
 18 in English, for the same proposition that the figure suggests a support member intersecting an
 19 inner volume of a pyramid shaped element:

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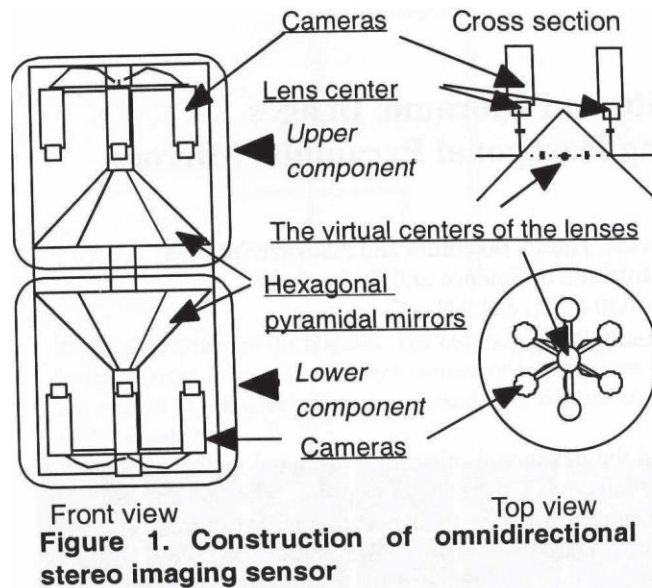
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Docket No. 179-14 (“Yamazawa 1998”) at 5. The only difference between the respective figures in Yamazawa 1997 and 1998 are that the caption in the bottom left, below the full diagram of the full device, is labeled as “cross-sectional view” in Yamazawa 1997 and as “front view” in Yamazawa 1998. Polycom does not address this difference in its motion.² Moreover, Polycom does not argue that there is any difference in what is disclosed as between Yamazawa 1997 and Yamazawa 1998. The accompanying analysis in Yamazawa 1998, like that of Yamazawa 1997, does not discuss, describe or otherwise comment on the construction, design or utility of any support member. Nothing titled a “support member” is identified in this invention. In this regard, the Yamazawa 1998 and Yamazawa 1997 are indistinguishable. The only difference between the papers that Polycom points to is that Yamazawa 1998 included an image, Figure 2, purporting to show a photograph of a prototype of the device diagrammed in Figure 1:

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² Polycom’s expert, Mr. Keller, however, asserts in his expert report that the use of the label of “cross section” in each paper was error. Docket No. 180-7 ¶¶ 77, 105. But Keller provides no support for this conclusory assertion, nor is there any evidence that Polycom confirmed with the author, Yamazawa, or any co-authors that the use of the word “cross-section” was, in fact, an error. In any event, Polycom does not defend this opinion of Keller’s in its briefing, even after FullView directly raised the point its opposition. Accordingly, this is not a material dispute of fact, nor need the Court rely on Keller’s unsupported assertion.

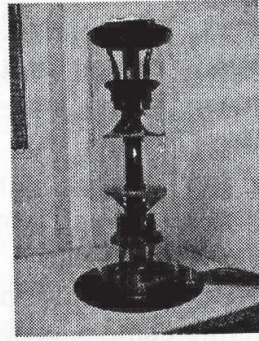


Figure 2. Omni-directional stereo imaging sensor

Id. However, the photograph is not accompanied with any description of its structural elements beyond those detailed in Figure 1. Accordingly, because Polycom cites the 1997 and 1998 papers for substantially the same proposition and diagrams, the references are referred to collectively as “Yamazawa.”

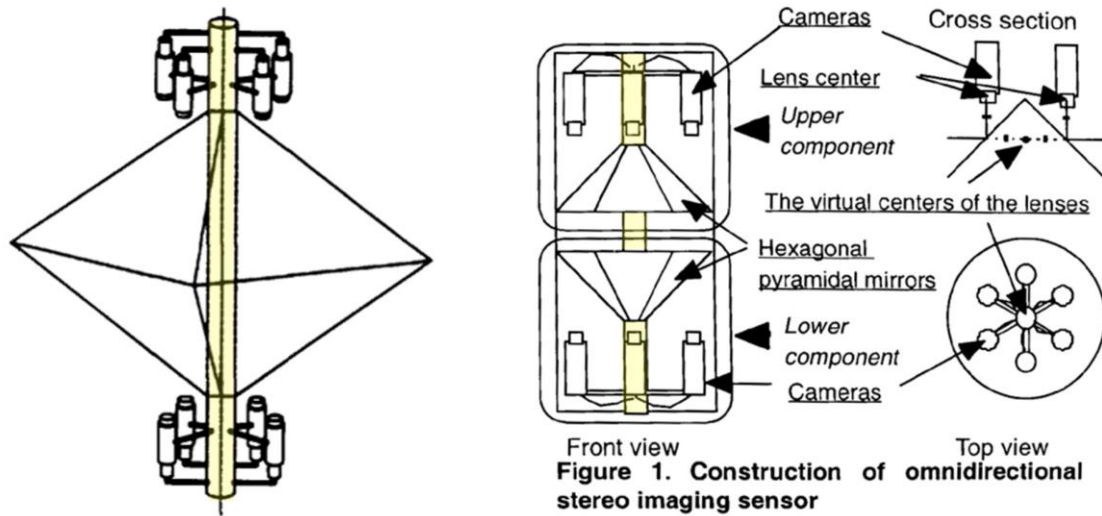
b. Comparing Yamazawa and Claim 10

The relevant portion of independent claim 10 at issue is “a support member intersecting an inner volume of the pyramid shaped element.”

As an initial matter, Polycom is *not* arguing that Yamazawa *anticipates* this limitation of claim 10. Thus, Polycom is *not* contending that Yamazawa inherently or definitively discloses every aspect of claim 10, as Polycom would be required to show under the law of *anticipation*. Rather, Polycom contends that the disclosures in Yamazawa render claim 10 *obvious*, because, under the law of obviousness, “a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artist would have had a reasonable expectation of success in doing so.” *Procter & Gamble*, 556 F.3d at 994.

Accordingly, Polycom argues that Yamazawa, at the very least, *suggests* a support member intersecting an inner volume of the pyramid shaped element, and that, to a POSITA, it would be “obvious to try” constructing the device described in Yamazawa with a support member intersecting the inner volume of the pyramid shaped element. Polycom MSJ at 23-26. To support this argument, Polycom depicts Fig. 18 from the ‘143 Patent (left), with the support member annotated in yellow, side-by-side with Yamazawa 1998 at Fig. 1 (right), with the alleged support

member annotated in yellow as well:



Next, Polycom contends that taking the Court’s construction of the term “pyramid shaped element” of the ‘143 Patent as allowing that the pyramid’s “apex and base may be absent,” a POSITA viewing the Yamazawa diagram would know that “there may be no base to attach a support member to, in which case a support member could *only* intersect an inner volume of the pyramid shaped element.” Polycom MSJ at 22 (emphasis added).

In particular, Polycom argues that it would have been obvious to try modifying the Yamazawa device to include a support member which intersects the inner volume because “in assessing the possible configurations of Yamazawa 1997 or Yamazawa 1998, the number of options is limited—either the mirrors and cameras are mounted to a support member that intersects an inner volume of the pyramid shaped elements and allows the camera cords to run from the top of the device through the support member and out the bottom so as not to obstruct the field of views, or the cameras and mirrors are mounted to multiple support members that are somehow balanced atop one other.” *Id.* at 23; *see also* Docket No. 183 (“Polycom Reply”) at 10 (“At best, claims 10-12 of the ‘143 patent simply attempt to patent one of two ways in which a [POSITA] would have thought to construct the device pictured in Yamazawa 1997 and Yamazawa 1998). In support of its “obvious to try” argument, Polycom advances several justifications.

1 First, Polycom asserts that “there is no objective reason or teaching away that would
2 counsel a [POSITA] from considering the Yamazawa references as teaching the most
3 mechanically simple construction of their device, namely one in which a single or contiguous
4 support member, to which all components are attached, runs through the length of the device and
5 provides a thoroughfare for the camera cords.” *Id.* at 23-24.

6 Second, Polycom asserts that Fig. 2 of Yamazawa 1998, a photograph of the device,
7 suggests that the cords are threaded through a contiguous support member, as such a design is the
8 only way that all of the cords could end up together at the bottom right of the device. *See supra*
9 Yamazawa 1998, Fig. 2.

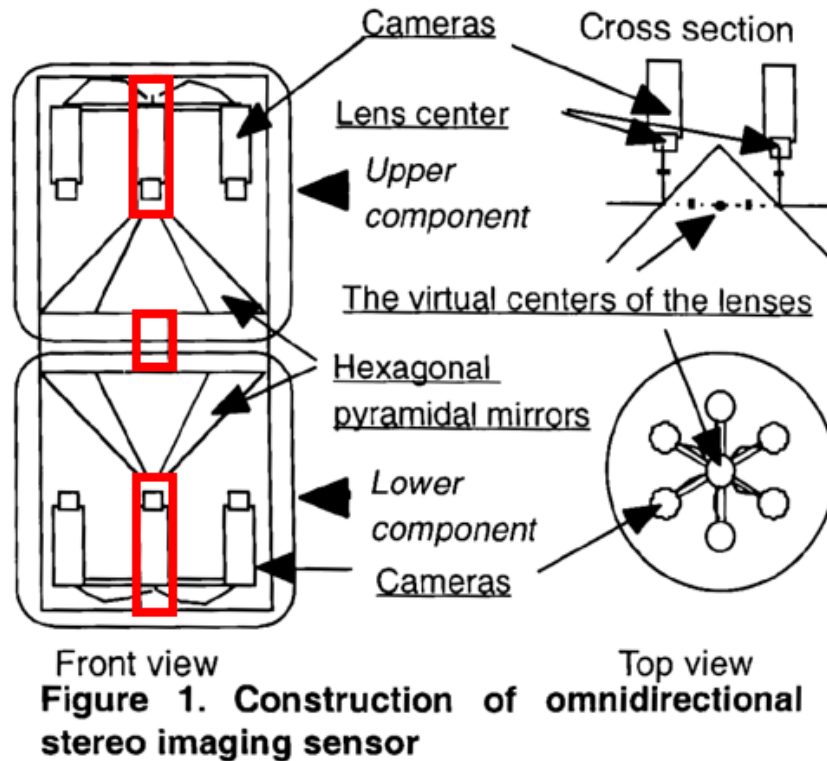
10 Third, Polycom argues that it would be obvious to try building the Yamazawa device with
11 a support member with the claimed intersection because a POSITA using “common sense” would
12 know that a “contiguous support member would provide rigidity to the overall structure of the
13 device, which would minimize stress on the optical mounts for the mirrors and cameras” which
14 “can cause warping or bending of these mounts.” *Id.* at 24 (citing Docket No. 179-1, Exh. 14,
15 Keller Report ¶ 82).

16 Finally, fourth, Polycom contends that it would be obvious to try the claimed intersection
17 because “a hollow, continuous support member would provide a straightforward place to pass the
18 camera wires or cable so that they do not obscure the 360-degree view from the apparatus.” *Id.*
19 Polycom summarizes that “this design choice would have been obvious to try because it represents
20 a structure capable of providing mechanical stability to the components of the apparatus.” *Id.*

21 Polycom’s evidence and arguments are insufficient to satisfy its burden to demonstrate
22 claims 10-12 are obvious by clear and convincing evidence.

23 First, Polycom’s argument that Yamazawa suggests (even if it does not expressly disclose)
24 a support member intersecting the inner volume of the pyramid shaped element lacks merit.
25 Polycom’s expert, Mr. Keller, provides an annotated diagram of the Yamazawa 1998, by which he
26 claims that his red annotations show that a POSITA “would understand that that the support
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member. . . would be a continuous support member.” Docket No. 180-7 (“Keller Report”) ¶ 82:



But this opinion amounts to little more than a conclusory assertion. The elements outlined in red need not consist of one contiguous member. For instance, each could be connected to the pyramidal shape which could be an open frame (like a cage), a solid hollow mold (like funnel with a closed top), or a completely solid pyramidal shape on which the mirrors are mounted. And nothing in the diagram indicates that the camera cables must threaded through a continuous support member. Mr. Keller does not rely on any expert knowledge to support his claim that his red annotation and the diagram as depicted show a contiguous support member. Nor does Mr. Keller articulate any design principles or conventions that would lead a POSITA to read the diagram as depicting a contiguous support member intersecting the inner volume.³

³ Mr. Keller’s reference to Fig. 2 of Yamazawa 1998 and assertion that the figure is self-evident in showing the claimed intersection, *Id.* ¶ 83, is similarly unsubstantiated and conclusory. Indeed, given that the photograph is of the *exterior* of the device, the Court cannot draw any conclusions about how the *interior* of the device is constructed from Fig. 2. Mr. Keller lends no expert methodology in reading the image that alters this conclusion. To the extent that Mr. Keller points to the presence of camera cables at the bottom of the image to infer that there is an inner support member, Mr. Keller provides no analysis for why such an inference must be drawn. For example, the wires could be threaded through a hole in the pyramidal shaped elements.

Mr. Keller's view is not supported by the cross-section view which unambiguously does *not* depict a support member intersecting the inner volume of the pyramid shaped element. FullView's expert, Dr. Nalwa, explains that a "POSITA would understand that a 'cross section' of anything exposes what is inside it," "and so, if a 'cross section' does not show something, that something is necessarily absent." Nalwa Decl. ¶ 70. Accordingly, contrary to Polycom's assertions, Yamazawa's cross-section views demonstrate the *absence* of the claimed intersection. *See also* Yamazawa 1997, Fig. 1 (noting "cross sectional view" in the bottom left corner):

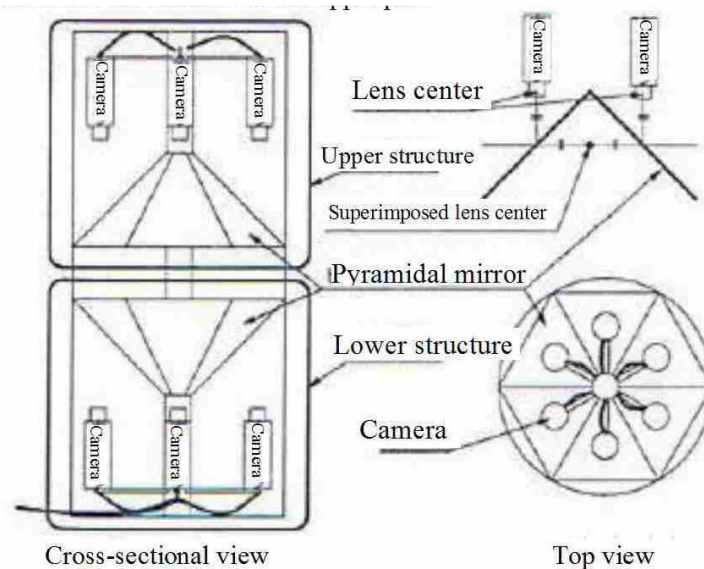


Fig. 1 Structure of omnidirectional stereo image sensor

Polycom fails to respond to this argument which FullView raises expressly in its opposition and in its own motion for summary judgment. Polycom ignores the argument altogether, and does not take into account that the cross-section label on the Yamazawa diagrams clearly does *not* show the support member intersecting the inner volume of the pyramid shaped element.⁴ Yamazawa's cross section diagrams preclude Polycom's argument that the diagram can

⁴ The PTAB noted this exact problem with Polycom's argument, derived from Fig. 1 in Yamazawa 1997, in denying institution of the IPR. *See* Docket No. 180-18 at 13 ("Without a sufficient basis to find the alleged support intersects Yamazawa's pyramidal mirrors, Yamazawa's reflective element at most contacts a support member. However, as explained above, this does not satisfy the claim's requirement that the support member 'intersect[] an inner volume' of the reflective element."). To be clear, the Court does not rely on the PTAB's denial of IPR, but observes that Polycom has been on notice of a central flaw in its reliance on Yamazawa to invalidate claim 10.

1 be fairly interpreted as including precisely what it omits.

2 Polycom, to prevail in its obviousness argument, must show claim 10 of the ‘143 Patent is
3 “obvious in light of a single prior art reference” – Yamazawa – because “it would have been
4 obvious to *modify* that reference to arrive at the patented invention.” *Arendi*, 832 F.3d at 1361
5 (emphasis added). Obviousness is shown when “a skilled artisan would have been motivated to
6 combine the teachings of the prior art references to achieve the claimed invention, and that the
7 skilled artisan would have had a reasonable expectation of success in doing so.” *Procter &*
8 *Gamble*, 566 F.3d at 994. Polycom relies on arguments that it would have been obvious to a
9 POSITA using “common sense” to try using the claimed intersection because a contiguous support
10 member would provide rigidity, minimize stress on the optical mounts, and would provide a
11 straightforward place to pass the camera wires. Polycom MSJ at 24. These arguments fail for two
12 reasons.

13 First, Polycom does not identify any reason *motivating* a POSITA to modify the
14 Yamazawa references to achieve the claim 10 of the ‘143 Patent. *Procter & Gamble*, 566 F.3d at
15 994. The Supreme Court’s decision in *KSR* confirms that Polycom bears the burden to produce
16 evidence demonstrating the existence of a contemporaneously known problem to which the
17 claimed invention was an obvious solution. *See KSR Int’l Co.*, 550 U.S. at 419-20 (obviousness
18 may be shown “by noting that there existed at the time of invention a known problem for which
19 there was an obvious solution encompassed by the patent’s claims.”). Polycom alludes to some of
20 the benefits that claim 10 provided – structural rigidity and providing a place to pass camera wires.
21 But Polycom introduces *no evidence at all* showing that either of these benefits were solutions to
22 *known problems that existed at the time* that would have motivated a POSITA to modify and
23 enhance the Yamazawa invention by trying the claimed invention of the ‘143. Indeed, Polycom
24 does not point to a single piece of evidence in the record indicating that achieving structural
25 rigidity or finding a place to pass camera wires were preexisting problems at the time that
26 Yamazawa 1997 or 1998 was published.

27 Indeed, as discussed above, Yamazawa 1997 provided an analysis of the shortcomings of
28 the device depicted in Figure 1. Yamazawa 1997 found that the device as designed was

1 “problematic” due to the “form of the pyramidal mirrors” and the number of cameras,” and
 2 suggested that future designs to experiment with either reducing the number of cameras or
 3 increasing the number of cameras, and testing different pyramidal forms in order to counteract
 4 changes to the number of cameras. Yamazawa 1997 at 3. Despite Yamazawa 1997’s own
 5 discussion of flaws in the design, and analysis of how the design could be improved, *nothing* in
 6 the discussion of Yamazawa 1997 suggested that there were problems with the rigidity of the
 7 structure, the stress on optical mounts, or finding a location where to pass the camera wires. The
 8 benefits of claim 10 did not address any of the problems that Yamazawa 1997 identified.
 9 Likewise, Yamazawa 1998 comments on shortcomings in the device design, but *nothing* in the
 10 discussion connects those shortcomings to issues related to the rigidity of the structure or issues
 11 related to the placement of the camera wires. *See* Yamazawa 1998 at 7 (“The present system has
 12 some problems: color adjustment is not complete; there is a limit in the precision of the calibration
 13 because of adjustment by the hand operation.”).

14 Nor does Polycom point to *any other papers or public information at the time* that indicate
 15 that a POSITA would have otherwise been aware of the problems Polycom asserts and would have
 16 been motivated to modify Yamazawa to achieve claim 10. *See Takeda Chem. Indus., Ltd. v.*
 17 *Alphapharm Pty., Ltd.*, 492 F.3d 1350, 1357 (Fed. Cir. 2007) (“[I]t remains necessary to identify
 18 some reason that would have led a [POSITA] to modify a known [prior art] in a particular manner
 19 to establish prima facie obviousness of a new claimed [invention].”); *TQ Delta, LLC v. Cisco Sys.*,
 20 942 F.3d 1352, 1358–59 (Fed. Cir. 2019) (“[W]e have emphasized the importance of factual
 21 foundation to support a party’s claim about what one of ordinary skill in the relevant art would have
 22 known. One form of evidence to provide such a foundation, perhaps the most reliable because not
 23 litigation-generated, is documentary evidence consisting of prior art in the area.”) (internal
 24 citations omitted).

25 Nor does Polycom contend there were any market driven factors motivating a POSITA to
 26 invent to claim limitations of ‘143. At the hearing, Polycom conceded it was only relying on
 27 design, not market, needs.

28 As to the asserted design needs, in the final analysis, Mr. Keller simply rests on the

benefits that claim 10 provided and reasons retrospectively to suggest that claim 10 would obviously obtain those benefits. Such ex post reasoning, unsupported by evidence of any contemporaneous need, is disfavored to support a claim of obviousness. *See Ortho-McNeil v. Mylan Lab*, 520 F.3d 1358, 1364 (Fed. Cir. 2008) (“In other words, [the expert] simply retraced the path of the inventor with hindsight, discounted the number and complexity of the alternatives, and concluded that the invention [] was obvious. Of course, this reasoning is always inappropriate for an obviousness test based on the language of Title 35 that requires the analysis to examine “the subject matter as a whole” to ascertain if it “*would have been obvious at the time the invention was made.*” 35 U.S.C. § 103(a) (emphasis added). In retrospect, [the inventor’s] pathway to the invention, of course, seems to follow the logical steps to produce these properties, but at the time of invention, the inventor’s insights, willingness to confront and overcome obstacles, and yes, even serendipity, cannot be discounted.”). Accordingly, Polycom fails to identify “any need or problem known in the field” at the time of the invention to solve which a POSITA would have found it “obvious to try” the claimed intersection. *KSR Intern.*, 550 U.S. at 420–421.

Second, even if Polycom had identified a problem motivating a POSITA to try the claimed intersection (which it has not), Polycom’s reliance on “common sense” to support its argument that the claimed intersection was “obvious to try” is flawed. The Court must heed the Federal Circuit’s three caveats when “applying ‘common sense’ in an obviousness analysis.” *DSS Tech. Mgmt.*, 885 F. 3d at 1373 (citation omitted). Polycom’s “common sense” arguments run afoul of each of the three caveats.

“First, common sense is typically invoked to provide a known motivation to combine, not to supply a missing claim limitation.” *Id.* (citation omitted). Yet Polycom asserts common sense to supply “the missing claim” limitation, not to support a known motivation.

“Second, we have invoked common sense to fill in a missing limitation only when ‘the limitation in question was unusually simple and the technology particularly straightforward.’” *Id.* (citation omitted). Here, Polycom asserts that the claimed intersection “the most mechanically simple construction,” Polycom MSJ at 23, but does not support this conclusion with *any* analysis or rationale. FullView’s expert, on the other hand, points out that there were disadvantages to

using a single, contiguous support member, as it would forego advantages in reducing weight, enhancing portability, and easing the process by which adjustments could be made to cameras that accompanied alternative modular designs. Nalwa Decl. ¶¶ 128-134, 141. Polycom fails to respond to these contentions. Polycom’s assertion that Fig. 2 of Yamazawa 1998 *necessarily* depicts a device in which camera cords are embedded in an inner support member like the claimed intersection because that is the *only* design that would result in the cords together at the bottom of the device is similarly conclusory. The cords could have been threaded through a hole drilled in the pyramid shaped elements *without* a support member intersecting the inner volumes of the pyramids.

Finally, “[t]hird, our cases repeatedly warn that references to ‘common sense’—whether to supply a motivation to combine or a missing limitation—cannot be used as a wholesale substitute for reasoned analysis and evidentiary support, especially when dealing with a limitation missing from the prior art references specified.” *DSS Tech. Mgmt.*, 885 F. 3d at 1373 (citation omitted). As noted, such evidentiary support is missing. Thus, Polycom’s “common sense” arguments are insufficient to support its argument that the claimed intersection is invalid.

4. Conclusion re: Polycom’s Motion for Summary Judgment

In summary, there are no material factual issues in dispute as to the factual underpinnings of Polycom’s argument that independent claim 10 (and, by extension, dependent claims 11-12) are invalid as obvious. Based on the undisputed record, Polycom fails to carry its burden to demonstrate by clear and convincing evidence that the Yamazawa 1997 and Yamazawa 1998 renders claim 10 of the ‘143 Patent obvious.⁵

B. FullView’s Motion for Summary Judgment (Docket No. 180)

FullView’s motion for summary judgment seeking to vindicate the validity of those same

⁵ “If a patent challenger makes a prima facie showing of obviousness, the owner may rebut based on ‘unexpected results’ by demonstrating ‘that the claimed invention exhibits some superior property or advantage that a person of ordinary skill in the relevant art would have found surprising or unexpected.’” *Procter & Gamble*, 566 F.3d at 994 (citing *In re Soni*, 54 F.3d 746, 750 (Fed. Cir. 1995)). Here, as discussed above, Polycom has not made out a prima facie showing of obviousness. Therefore, the Court need not address whether FullView has sufficiently rebutted a prima facie case with identifying unexpected, secondary considerations from the claimed intersection.

claims argues that none of the five grounds identified in Polycom’s initial invalidity contentions are sufficient to invalidate claims 10-12. *See* Background § B(2); FullView MSJ. As already explained, Yamazawa 1997 and 1998 do not render obvious (nor do they anticipate) claims 10-12. FullView also argues that the Iwerks patent and Goto patent, Grounds 2 and 3 of Polycom’s initial invalidity contentions, neither anticipate nor render obvious claims 10-12. As to the Iwerks and Goto patents, Polycom argues in opposition to FullView’s motion for summary judgment that there are genuine issues of material fact regarding the import of the Iwerks and Goto patents as to the validity of claims 10-12. Polycom is wrong.

First, Polycom does *not* identify genuine issues of material *fact* with regards to those two patents: instead, Polycom disagrees with FullView’s application of this Court’s claim construction and the law of obviousness to the *undisputed* facts of the contents of those two patents. *See* Docket No. 182 (“Polycom Opp.”) at 13-15 (disagreeing with FullView’s analysis that the Iwerks mechanism is not covered by this Court’s construction of “pyramid shaped element,” disagreeing with FullView’s argument that the intersection in the Iwerks’ patent is too “insubstantial” to satisfy the claim language, and disagreeing with FullView’s argument that the Goto patent is “irrelevant” to the ‘143 Patent). Polycom does not take issue with any *evidence* in the record as to the Iwerks and Goto Patents. Polycom merely disagrees with FullView’s *legal analysis* of the import of these patents. Accordingly, the question of obviousness based on Iwerks and Goto patents are subject to summary judgment.

Thus, second, because there are no genuine disputes of fact as to the Iwerks and Goto patents, Polycom still retains the burden show by clear and convincing evidence the either or both patents render claims 10-12 obvious in order to preclude summary judgment to FullView. *Oakley, Inc.*, 316 F.3d at 1339. Polycom fails to do so.

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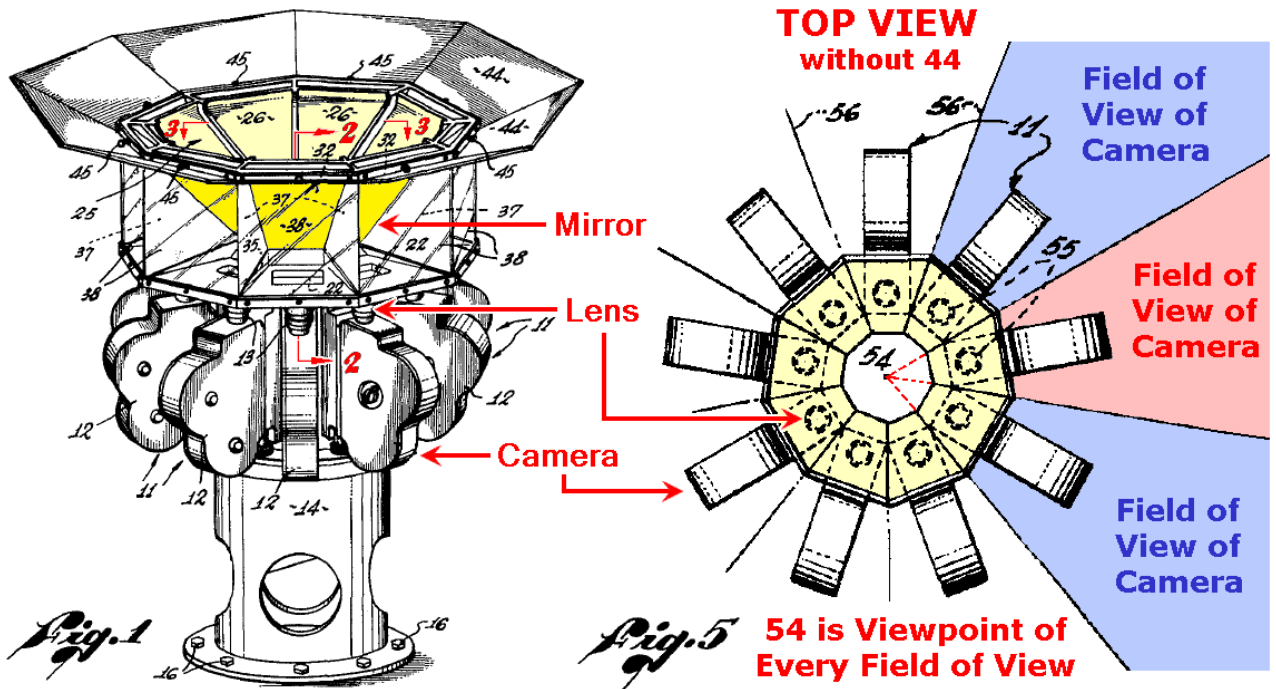
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The Court agrees with FullView that the Iwerks patent depicts a device in which mirrored elements are mounted *on top* of a cylindrical support, rather than a device with the claimed intersection of the '143 Patent, in which a support member *intersects the inner volume* of the mirror elements:

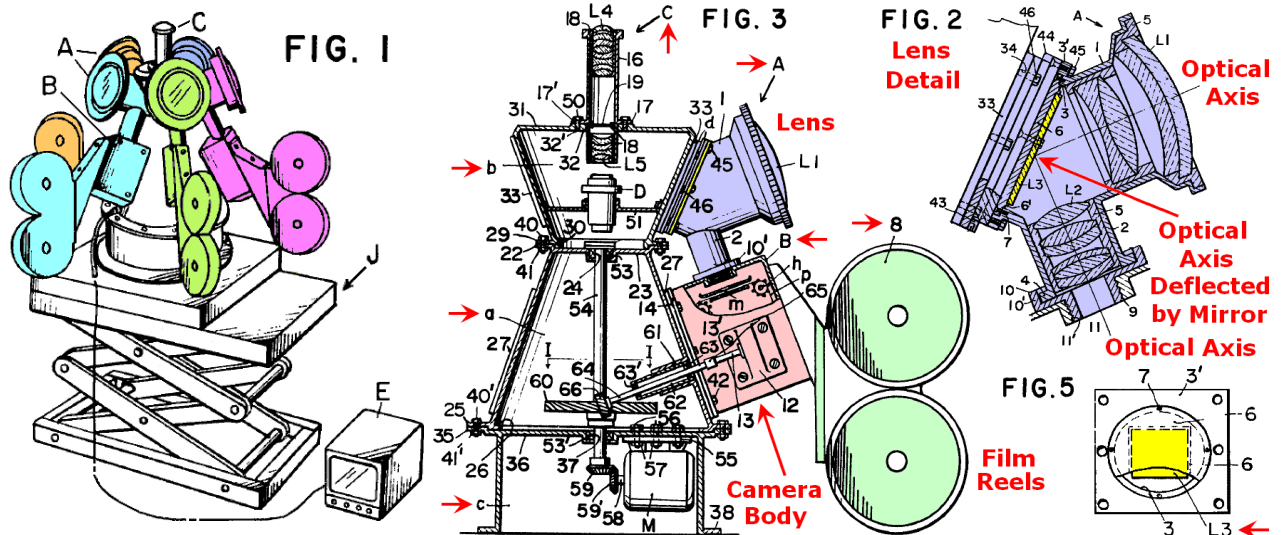


Docket No. 180-14 ("Iwerks Patent") at Fig. 1, Fig. 5; Docket No. 180 at 15 (annotations).

Polycom fails to present any analysis that the Iwerks patent discloses the challenged claims of the '143 Patent so as to anticipate the challenged claims. Even if the Court were to accept Polycom's view that the Iwerks patent is a relevant prior art for the obviousness analysis, Polycom neither argues nor presents evidence that a POSITA would be motivated to modify the Iwerks patent in a manner that would obviously achieve the challenged claims.

Moreover, the Court agrees with FullView that the Goto patent does not suffice to invalidate the challenged claims under either an anticipation or obviousness analysis of the '143 Patent. Goto depicts a device in which five *cameras are mounted directly to a conical support with mirror elements inside the camera*, rather than cameras which are pointed towards a

pyramidal mirror element:



Docket No. 180-13 (“Goto Patent”) at Figs. 1, 2, 3, 5; FullView MSJ at 20-21 (annotations).

Based on the diagrams of the Goto device, each camera includes a rectangular mirror (highlighted in yellow) *inside* of the camera which alters the optical center of the respective camera. These mirrors are inside of each individual camera and are not connected to one another. The cameras are mounted to a cone-shaped support. Thus, this design does not conform to the construction of “pyramid shaped element” of the ‘143 Patent and differs extensively in the function and design from the ‘143 Patent. Again, Polycom presents no argument or analysis that the Goto patent discloses the challenged claims, nor does it analyze how the Goto patent renders the challenged claims obvious.

In short, Polycom’s disagreement with FullView’s legal analysis of the Iwerks and Goto patents do not provide a basis on which to deny FullView summary judgment as to the validity of claims 10-12 of the ‘143 Patent. Polycom does not advance any analysis or evidence demonstrating by clear and convincing evidence that the Iwerks or Goto patents render claims 10-12 obvious. *Cf.* Polycom Opp. at 13-15 (failing to explain how, even if the Court were to adopt Polycom’s view of the Iwerks and Goto patents, Polycom would satisfy its burden to render claims 10-12 obvious). Accordingly, FullView is entitled to summary judgment that those claims are valid. The Court **GRANTS** FullView’s motion for summary judgment.

C. FullView's Motion to Strike (Docket No. 180)

FullView moves to strike references by Polycom's expert, Mr. Keller, to Nalwa 1996 and the UNC Device in his expert report, arguing that these reference flout this Court's order denying Polycom's motion to leave to amend its invalidity contentions to include Nalwa 1996 and the UNC Device. *See* FullView MSJ at 23, Docket No. 172 ("Order Denying Leave to Amend"). FullView is incorrect that Polycom has violated the Court's order.

The Court previously denied Polycom leave to amend its invalidity contentions to include references to Nalwa 1996 and the UNC Device, and denied Polycom leave to amend its answer to state a claim for inequitable conduct based on Dr. Nalwa's alleged failure to disclose Nalwa 1996 to the PTO. *See* Order Denying Leave to Amend at 14-18. The Court did not prohibit Polycom from making *any reference* to Nalwa 1996 or the UNC Device. Polycom's expert report and motion for summary judgment appropriately complies with the Court's prior order. Polycom did not amend its invalidity contentions to include either reference, nor did Polycom move for summary judgment as to invalidity on the basis of either reference. Polycom's references to Nalwa 1996 and the UNC Device are made in the context of describing Mr. Keller's background and qualifications (he declares that he worked on the UNC Device) and to describe the state of the art when the '143 Patent was filed. Polycom did not violate this Court's order. Accordingly, the Court **DENIES** FullView's motion to strike.

IV. CONCLUSION

The Court **DENIES** Polycom's motion for summary judgment. Docket No. 179. The Court **GRANTS** FullView's motion for summary judgment. Docket No. 180. The Court **DENIES** FullView's motion to strike. *Id.*

This order disposes of Docket Nos. 179 and 180.

IT IS SO ORDERED.

Dated: March 21, 2022


 EDWARD M. CHEN
 United States District Judge